

Family 233. ERICACEAE

Revisions:

Argent, G

Copeland, HF. 1929. *Philippine Ericaceae, I. The species of Rhododendron*. Philippine Journal of Science 40: 133-179, +16 pl.

Copeland, HF. 1930. *Philippine Ericaceae, II The species of Vaccinium*. Philippine Journal of Science 42: 537-607, +7 pl.

Copeland, HF. 1932. *Philippine Ericaceae, III: A taxonomic revision, concluded*. Philippine Journal of Science 47: 57-118, +8 pl.

Sleumer, H. 1966. *Ericaceae*. Flora Malesiana series 1, 6: 469-914.

1. Costera JJ Smith

Revision:

Copeland, HF. 1932. *Philippine Ericaceae, III: A taxonomic revision, concluded*. Philippine Journal of Science 47: 82-86 (as *laera*), t. 6, Fig. 1-9; t. 7, Fig. 1-5.

Costera lanaensis (Merr.) Airy Shaw & JJ Sm, Bull. Jard. Bot. Buitenz. 3, 13 (1935) 421; --
--*Vaccinium lanaense* Merr., PJS 3 c (1908) Bot. 161; EPFP 3 (1923) 250. --Type: Clemens Sleum., Blumea 11 (1961) 431 (PNH, holo, lost).

Philippines, Moluccas (Morotai; Talaud Is.).

NEGROS: Negros Oriental prov. (Cuernos Mtns); PANAY: Capiz prov. (Mt Bulilao);

MINDANAO: Zamboanga (Sax River, San Ramon), Lanao del Norte prov. (Camp Keithley, type locality); Davao: (Mt Apo, type locality of *Vaccinium medinilloides* Elmer).

Midmontane forest, humid river gullies, etc., epiphytic on branches, 700-1300m.

Costera loheri (Merr.) Airy Shaw & JJ. Sm., Bull. Jard. Bot. Buitenz. 3, 13 (1935) 421; --*laera loheri* (Merr.) HF Copel., PJS 47 (1932) 85, t. 7, Fig. 1-5. --Sleum., Blumea 11 (1961) 3; --
Vaccinium loheri Merr., PJS 7 c (1912) Bot. 323; EPFP 3 (1923) 250. --Type: Loher 6187 (PNH, holo, lost; US).

LUZON: Rizal (Sierra Madre Range E of Montalban); PANAY: Iloilo (Miag-ao). In mossy forest, probably above 1000m.

Costera lucida (Merr.) Airy Shaw & JJ Sm, Bull. Jard. Bot. Buitenz. 3, 13 (1935) 421; --*laera lucida* (Merr.) HF Copel., PJS 47 (1932) 85, t. 6, Fig. 7-9; --*Diplycosia lucida* Merr., PJS 11 c (1916) Bot. 28. --Type: BS 23504 (PNH, holo, lost; US). Luzon: Sorsogon prov., Mt Kilibong
Vaccinium costeroides Merr., EPFP 3 (1923) 248. --Type:

LUZON: Sorsogon. Epiphytic in the mossy forest at c. 1000m. *Fl./fr.* Aug. Known only from the type collection.

2. Dimorphanthera (Drude) F Mueller ex JJ Smith

Revisions:

H Copeland, HF. 1932. *Philippine Ericaceae, III: A taxonomic revision, concluded*. Philippine Journal of Science 47: 86-93, t. 7, Fig. 6-7; t. 8, Fig. 1-4.

Sleumer, H. 1961. *Florae Malesianae Praecursores XXVI. The genus Dimorphanthera F.v.M., Nova Guinea*, Bot. no. 7: 73-102.

Dimorphanthera apoana (Merr.) Schltr., Bot. Jahrb. 55 (1918) 185, *in text*; --Merr., EPFP 3 (1923) 252; --HF Copel., PJS 47 (1932) 89, t. 7, Fig. 6-7, t. 8, Fig. 1-4; --Sleum., Nova Guinea, Bot. no. 7 (1961) 83; --*Vaccinium apoanum* Merr., Publ. Govt. Lab. Philipp. 29 (1905) 39. --Type: Copeland 1105 (PNH, holo, lost; iso K, NY, US).

Vaccinium calelanum Elmer, LPB 3 (1911) 1096. --Type:

var. apoana

PANAY: Antique (Mt Madias); NEGROS: Negros Occidental (Mt Silay; Mt Kanlaon), MINDANAO: Davao (Mt Apo; Mt Calelan; Mt McKinley), Bukidnon (Mt Candoon; Mt Kitanglad; Mt Kinasalapi). In mossy forest, often on exposed ridges or in summit vegetation, 1200-2450m. *Fl. Jan-Dec*

var. mindanaensis (Merr.) PF Stevens, J. Arnold Arb. 58 (1977) 439; --Dimorphanthera mindanaensis Merr., PJS 20 (1922) 418; EPFP 3 (1923) 252; --HF Copel., PJS 47 (1932) 92; --Sleum., Nova Guinea, Bot. no. 7 (1961) 82. --Type: FB 4708 Mearns & Hutchinson (PNH, **lecto, lost**), Mindanao: Misamis Occidental prov., Mt Malindang, MINDANAO: Misamis Occidental (Mt Malindang), Bukidnon (Mt Lipa). Mossy forest, c. 1700m. Twice found.

3. *Diplycosia* Blume

Revisions:

Copeland, HF. 1932. *Philippine Ericaceae, III: A taxonomic revision, concluded*. Philippine Journal of Science 47: 63-82, t. 1, Fig. 6-7; t. 2, Fig. 1-6; t. 3, Fig. 1-5; t. 4, Fig. 1-2; t. 5, Fig. 1-2.

Sleumer, H. 1957. *Florae Malesianae Praecursores XIV. A revision of the genus Diplycosia (Ericaceae)*. Reinwardtia 4: 119-161.

Diplycosia apoensis Elmer, LPB 3 (1911) 1101 ('apoense'); --Merr., EPFP 3 (1923) 246; --HF Copel., PJS 47 (1932) Copel., PJS 47 (1932) (PNH, holo, lost; iso: BISH*, BO, E, FI, K, L*, MO*, NY*, US*). Mindanao: Davao, Mt Calelan. MINDANAO: Davao (Mt Calelan), Bukidnon (Mt Lipa). In dwarfed mossy forest, on exposed peaks and ridges, c. 2500m. *Fl. Sept.*

Diplycosia heterophylla Blume Bijdr. (1826) 858. --Type from Java.

var. latifolia (Blume) Sleum., Reinwardtia 4 (1957) 156; --*Diplycosia latifolia* Blume, Bijdr. (1826) 858. --Type:

Diplycosia baclayensis Elmer, LPB 3 (1911) 1100; --Merr., EPFP 3 (1923) 246; --HF Copel., PJS 47 (1932) 78. --Type: Elmer 11595 (PNH, holo, lost; iso in E, K, L*, MO*, NY*). Mindanao: Davao del Sur prov., Mt Apo

S Thailand; Sumatra, Peninsular Malaysia, Banka, Java, Borneo (Sarawak, C& E, SE part), S Philippines.

MINDANAO: Davao del Sur (Mt Apo). Free standing treelet or shrub to 6m, or an epiphyte in montane forest, especially in mossy forest, 1000-2500m.

Diplycosia loheri Merr., PJS 27 (1925) 44; EPFP 4 (1925) 253; --HF Copel., PJS 47 (1932) 67, t. 1, Fig. 6-7; --Sleum., Reinwardtia 4 (1957) 131. --Type: Loher 13693 (PNH, holo, lost; E, fragment of type; US).

LUZON: Nueva Vizcaya (Caraballo Mtns). Known only from the type collection.

Diplycosia luzonica (A Gray) Merr., PJS 2 c (1907) Bot. 293; EPFP 3 (1923) 247; --HF Copel., PJS 47 (1932) 71, t. 2, Fig. 3-6; t. 3; t. 4, Fig. 1. --Sleum., Reinwardtia 4 (1957) 143; --*Gaultheria luzonica* A Gray, Proc. Amer. Acad. Arts Sc. 5 (1861) 324. --Type: USS Pacif. Expl. Exp. (GH, holo; iso US).

Diplycosia scandens Merr., PJS 1 (1906) Suppl. 219; EPFP 3 (1923) 247. --Type: Merrill 4597 (cited as '4579') (PNH, holo, lost; iso in BO, K, L*, NY*, US*). Luzon: Mountain Province, Mt Data.

Diplycosia fasciculiflora Merr., PJS 10 c (1915) Bot. 52; EPFP 3 (1923) 246. --Type: BS 37811 Ramos & Edaño (PNH, holo, lost). Luzon: Ifugao prov., Mt Polis.

var. luzonica

LUZON: Abra, Kalinga (Balbalasang), Mountain Province (Mt Data; Mt Pukis), Ifugao (Mt Polis), Benguet (Mt Simacoco; Mt Pulag; Mt Pulogloco; Mt Baudan), Laguna (Mt

Banahaw), CATANDUANES (Mt Mariguison); BILIRAN (Mt Suiro), NEGROS: Negros Occidental (Canlaon Volcano), Negros Oriental (Cuernos Mtns), MINDANAO: Misamis Occidental (Mt Malindang). Both in mossy forest or forest edge, and on dry exposed grassland-slope, 1100-2700m. *Fl./fr.* Jan.-Dec.

var. calelanensis (Elmer) Sleum., *Reinwardtia* 4 (1957) 144; --*Diplycosia calelanensis* Elmer, LPB 3 (1911) 1103; --Merr., EPFP 3 (1923) 246; --HF Copel., PJS 47 (1932) 74, t. 5, Fig. 1. --Type: Elmer 11681 (US, holo; iso: A, BISH*, BO, CAL, E, FI, K, L*, MO*, NY*, US*). Mindanao: Davao, Mt Calelan, epiphytic shrub on stunted trees or shrubs on the summit, 8500ft, Sept 1909.

Diplycosia glabra Merr., PJS 14 (1919) 442; EPFP 3 (1923) 247. --Type: BS 31784 JK Santos (PNH, holo, lost; iso in A, BO, CAL, K, L*). Luzon: Benguet prov., Pauai.

Diplycosia opaca C Robinson, PJS 6 c (1911) Bot. 355; --Merr., EPFP 3 (1923) 247; --HF Copel., PJS 47 (1932) 77, t. 5, Fig. 2. --Type: BS 9385 Robinson (PNH, holo, lost; iso in US*). Luzon: Quezon prov., Infanta, Mt Binuang, Aug 1909.

LUZON: Benguet (Mt Sto Tomas; Mt Ugo; Pauai), Rizal (Montalban; Pinauisan), Quezon (Mt Binuang), Sorsogon, PALAWAN (Mt Mantalingahan), MINDANAO: Davao (Mt Calelan); South Cotabato (Mt Matutum). In forest, especially in dwarfed mossy forest on exposed peaks and ridges, 900- 2500m.

var. merrittii (Merr.) Sleum., *Reinwardtia* 4 (1957) 144; --*Diplycosia merrittii* Merr., PJS 2 c (1907) Bot. 293; EPFP 3 (1923) 247. --Type: Merrill 5670 (PNH, holo, lost; iso in K, L*, NY*, US*). Mindoro: Mindoro Oriental prov., Mt Halcon, Nov 1906.

MINDORO: Mindoro Oriental (Mt Halcon), MINDANAO: Bukidnon (Mt Lipa); reported from PALAWAN: Mt Victoria by H Copeland.

var. pubens Sleum., *Reinwardtia* 4 (1957) 143. --Type: BS 40397 Ramos & Edaño (L*, holo; iso: A, BO, K, SING*, US*). Luzon: Benguet prov., Mt Pulogloco, Sept 1921.

LUZON: Benguet (Mt Pulag; Mt Pulogloco).

Diplycosia parvifolia Merr. PJS 5 c (1910) Bot. 211; EPFP 3 (1923) 247; --HF Copel., PJS 47 (1932) 81; --Sleum., *Reinwardtia* 4 (1957) 137. --Type: Merrill 6995 (PNH, holo, lost; iso: K, L*). Negros: Negros Occidental prov., Mt Kanlaon, altitude c. 1500m.

LUZON: Ifugao (Mt Polis); NEGROS: Negros Occidental (Mt Kanlaon). In mossy forest, 1500-1855m.

Diplycosia trinervia Elmer, LPB 3 (1911) 1102; --Merr., EPFP 3 (1923) 247; --HF Copel., PJS 47 (1932) 68; --Sleum., *Reinwardtia* 4 (1957) 142. --Type: Elmer 11676a (US*, holo; E, K, L*, NY*, PNH). Mindanao: Davao del Sur prov., Todaya, Mt Apo, elfinwoods at the summit of Mt Calelan, Sept 1909.

Diplycosia luzonica Elmer, LPB 3 (1911) 1105, *non* A Gray.

var. trinervia

MINDANAO: Davao (Mt Calelan). In dwarfed mossy forest, c. 2500m. *Fl.* Sept.

var. urdanetensis (Elmer) Sleum., *Reinwardtia* 4 (1957) 143; --*Diplycosia urdanetensis* Elmer, LPB 7 (1915) 2628; --Merr., EPFP 3 (1923) 247. --Type: Elmer 13800 (PNH, holo, lost; iso: A, BISH*, BO, CAL, E, GH, K, L* Urdaneta (=Hilong-hilong). Mossy forest, epiphytic on mossy trunk, c. 2000m, Sept 1912.

MINDANAO: Agusan del Norte (Mt Hilong-hilong). Mossy forest, c. 2000m. *Fl.* Sept. Known only from the type collection.

4. *Gaultheria* Kalm ex Linnaeus

Revisions:

Copeland, HF. 1932. *Philippine Ericaceae, III: A taxonomic revision, concluded*. Philippine Journal of Science 47: 57-63, t. 1, Fig. 1-5.

Sleumer, H. 1957. *Florae Malesianae Praecursores XV*. The genus *Gaultheria* in Malaysia.

Reinwardtia 4: 163-188.

Gaultheria borneensis Stapf, Trans. Linn. Soc. II, Bot. 4 (1894) 190, t. 15, Fig. C 4-6; --Merr., EPFP 3 (1923) 246; --Sleum., Reinwardtia 4 (1957) 163-188. --Type from Borneo (Sabah: Mt Kinabalu).

Gaultheria itoana Hayata, Mat. Fl. Formosa (1908) 150, t. 25.

Gaultheria benguetensis HF Copel., PJS 47 (1932) 58, pl. 1, Fig. 4&5. --Type: Merrill 4796 (PNH, holo, lost; iso: K*, NY*, US*). Luzon: Benguet prov., Pauai to Baguio, Oct-Nov 1905.

Borneo (Sabah: Mt Kinabalu) and the Philippines.

LUZON: Mountain Province (Mt Data), Benguet (Halsema Road; Pauai; Mt Pulag).

Prostrate, not rarely cushion-like shrublet in ± open places along pine forest edges, also on talus along road, 1800-2400m. *Fl./fr.* Jan.-Dec.

Gaultheria leucocarpa Blume, Bijdr. (1826) 856.

var. leucocarpa forma cumingiana (Vidal) Sleum., Reinwardtia 4 (1957) 179; --*Gaultheria cumingiana* Vidal, Phan. Cuming. Philip. (1885) 184; --Merr., EPFP 3 (1923) 246, *pro parte*; --HF Copel., PJS 47 (1932) 61, t. 1, Fig. 2. --Type: Cuming 934 (cited as '932', MA, holo; iso: BM, K*, L*, MEL). Luzon: Albay prov., Mt Mayon, year 1841.

Upper Burma, SW and S China, N Vietnam, Thailand, Taiwan, Peninsular Malaysia, Sumatra, E Java, Philippines.

LUZON: Kalinga (trail to Balbalasang), Benguet (Mt Sto Tomas; Baguio; Baguio-Ambuklao Road; Mt Pulag; Buguias; Abatan; Bucao; Halsema Road), Mountain Province (Mt Data; Besao, Agawa; Datakan), Ifugao (Mt Polis), Zambales (Mt Pinatubo), Laguna (Mt Banahaw; Mt San Cristobal), Albay (Mt Mayon). Usually in open, exposed sites in the montane zone (common in the pine belt of the Cordillera Highlands), c. 900-2500m. On steep slopes, exposed outcrops along roadcuts, crater margins, gravelly ground, volcanic or occasionally peaty and generally poor soil, occasionally epiphytic. *Fl.* Jan-Dec.

var. psilocarpa (HF Copel.) Sleum., Reinwardtia 4 (1957) 183; --*Gaultheria psilocarpa* HF Copel., PJS 47 (1932) 62, t. 1, Fig. 3. --Type: BS 38903 Ramos & Edaña (PNH, holo, lost; A, BM, BRI, L). Mindanao: Bukidnon prov., Mt Candoon.

Gaultheria cumingiana (*non* Vidal) Merr., EPFP 3 (1923) 246, *pro parte*;

LUZON: Laguna (Mt Mahayhay = probably within Mt Banahaw complex; once found in Luzon), MINDORO: Mindoro Oriental (Mt Halcon), NEGROS: Negros Occidental (Canlaon Volcano), MINDANAO: Bukidnon (Mt Candoon), Davao (Mt Calelan). Alt. 1800-2800m.

Iaera H Copeland = Costera

5. *Rhododendron* Linnaeus

Revisions:

Copeland, HF. 1929. *Philippine Ericaceae, I: The species of Rhododendron*. Philippine Journal of Science 40: 133-179, +16 plates.

Sleumer, H. 1960. *Rhododendron in Malaysia*. Reinwardtia 5: 45-231.

Rhododendron acrophilum Merr. & Quisumb., PJS 82 (1953) 333; Sleum., Reinwardtia 5 (1960) 130. --Type: PNH 34 Edaña (A, holo; BM, K, L*, PNH, US*). Palawan: Mt Mantalingahan. Mossy forest, c. 1725m, 13 May 1947.

PALAWAN: Mt Mantalingahan. Known only from the type collection. *Fl.* May.

Rhododendron apoanum Stein, Gartenflora 34 (1885) 194, t. 1196; --Merr., EPFP (1923) 243; --H Copel., PJS 40 (1929) 146; --Sleum., Reinwardtia 5 (1960) 99. --Type: Schadenberg *sn* (year

1882, B, holo; lost). Mindanao: Davao, Mt Apo.

MINDANAO: Davao (Mt Apo and adjacent higher peaks), Bukidnon (Mt Lipa; Mt Kitanglad), Agusan del Norte (Mt Hilong-hilong). Mossy forest on peaks and ridges, 1380-2930m, apparently not rare on Mt Apo. *Fl.* Mar, May-Oct.

Rhododendron bagobonum HF Copel., PJS 40 (1929) 151, t. 4, Fig. 1-2; Sleum., Reinwardtia 5 (1960) 154. --Type: MS Clemens *sn* (UC*, holo). Mindanao: Davao, Mt Apo, Jun 1924.

Borneo (Sarawak; C and E Borneo), Philippines.

PALAWAN (Mt Mantalingahan), CAMIGUIN (Mt Hibok-hibok), MINDANAO: Davao (Mt Apo). Probably an epiphyte (*fide* HF Copel.), other local ecological notes not clearly stated. Those given by Sleumer are largely based on Borneo: in primary mossy forest on mountain ridges, heath forest, mostly open sunny places, 900-2135m. *Fl.* Jan-Dec

Rhododendron brachygynum HF Copel., PJS 40 (1929) 137, 165, t. 11, Fig. 4-6; --Sleum., Sudlon.

Reinwardtia 5 (1960) 2

CEBU: Sudlon. Known only from the type collection.

Rhododendron edanoi Merr. & Quisumb., PJS 83 (1953) 333. --Type: PNH 153 Edaña (A, holo; iso: BM, K, L*, PNH, US*). Palawan: Mt Mantalingahan. Mossy forest, alt. 1725m, 13 May 1947.

ssp. edanoi

PALAWAN: Cleopatra Needle; Thumb Peak; Mt Mantalingahan. *Fl.* May.

The other subspecies in Borneo.

Rhododendron jasminiflorum Hook., Bot. Mag. (1850) t. 4524.

var. copelandii (Merr.) Sleum., Reinwardtia 5 (1960) 130; --Rhododendron copelandii Merr., Publ. Govt. Lab. No. 29 (1905) 42; --HF Copel., PJS 40 (1929) 158, t.7, Fig. 1-5. --Type: EB Copeland 1439 (PNH, holo, lost; L*, lecto; iso: A, K, NY*, P, US*). Mindanao: Davao, Mt Apo summit thickets, Oct 1904.

MINDANAO: Davao (Mt Apo). High-montane thickets, 2350-3100m. *Fl.* Mar-Nov.

Rhododendron javanicum (Blume) Benn. *in* Benn. & Br., Pl. Jav. Rar. (1838) 85 (excl. t. 19).

ssp. palawanense Argent, Gard. Bull. Sing. 56 (2004) 90. --Type: Argent & Romero Acc. 19922770 (PNH, holo; iso: E). Cultivated specimen collected 16 Jan 1998. Palawan: Mt Mantalingahan.

PALAWAN (Cleopatra Needle; Thumb Peak; ?Victoria Peak; Mt Mantalingahan).

ssp. schadenbergii (Warb.) Argent, Rhododendrons of Subgenus Vireya (2006) 247; --

Rhododendron javanicum var. schadenbergii (Warb.) Sleum., Reinwardtia 5 (1960) 195; --

Rhododendron schadenbergii Warb. *in* Perkins Fragm. Fl. Philip. 3 (1905) 172; --Merr., EPFP 3

(1923) 245, *pro parte*; --HF Copel., PJS 40 (1929) 170, t. 15, Fig. 2, t. 16, Fig. 3-4. --Type:

Schadenberg, *sn* (B, holo, lost). Luzon: Abra prov., altitude 1300m.

Rhododendron spectabile Merr., Publ. Govt. Lab. Philipp. no. 29 (1905) 42; --Merr., EPFP 3 (1923) 245;

--H Copel., PJS 40 (1929) 168, t. 13, Fig. 4-5, t. 14. --Type: EB Copeland 1438 (PNH, lecto, lost; A; E, fragm. ex PNH; K; iso US*). Mindanao: Davao, Mt Apo, Oct 1904.

Rhododendron clementis Merr., PJS 3 c (1908) Bot. 160, 381; EPFP 3 (1923) 243; --HF Copel., PJS 40 (1929) 167, t. 12, Fig. 1

Sur prov. Camp Keithley, Oct 1906.

LUZON: Apayao (Mt Magnas), Kalinga (Tinglayan), Ifugao (Mt Polis), Abra, Mountain Province, Benguet, PALAWAN (Mt Mantalingahan), CAMIGUIN (Hibok-hibok Volcano), JOLO, MINDANAO: Zamboanga (Sax River); Lanao del Sur (Camp Keithley, along Lake Lanao), Bukidnon (Kaatoan), Davao (Mt Apo; Mt Calelan), South Cotabato (Mt Matutum). Low to high montane primary and secondary forests, also near volcanic craters, narrow ridge crests, steep slopes, in rather dry grounds, between rocks, along streams, etc., altitude 600-2900m. Mostly epiphytic, but on Mt Apo also reported as a terrestrial shrub.

Rhododendron kochii Stein, *Gartenflora* 34 (1885) 193, t. 119; --Merr., *EPFP* 3 (1923) 243; --HF Copel., *PJS* 40 (1929) 160, t. 7, Fig. 6-7, t. 8, t. 11, Fig. 1; --Sleum., *Reinwardtia* 5 (1960) 212. --Type: Schadenberg *sn* (B, holo, lost); Elmer 11435 (L*, neotype; iso: A, BM, BO, E, FI, GH, K, NY*, U). Mindanao: Davao, Mt Apo, Todaya, Aug 1909.

LUZON: Mountain Province, Bataan (Mt Mariveles), Laguna (Mt San Cristobal; Mt Banahaw), MINDORO: Mindoro Oriental (Mt Halcon; Ilong Peak), NEGROS: Negros Occidental (Mt Kanlaon), MINDANAO: Davao (Mt Apo; Mt McKinley), Lanao del Sur (Camp Keithley along Lake Lanao), Misamis Occidental (Mt Malindang). H Copeland also mentions *BS 692 Foxworthy* from PALAWAN (Mt Victoria) as possibly conspecific but because material is merely in fruit, cannot be positively identified. Nonetheless, this is the only *Rhododendron* seen by him from PALAWAN. On ridges on mossy forest, 1000-2300m. *Fl. Jan-Dec*

Rhododendron leytense Merr., *PJS* 10 c (1915) 55; *EPFP* 3 (1923) 244; -- HF Copel., *PJS* 40 (1929) 165, t. 11, Fig. holo, lost; iso: BM; E, fragm. ex PNH; K, L*, P, US*). Leyte: Mt Ibuni (back of Dagami). *Rhododendron flaviflorum* Elmer ex Merr., *EPFP* 3 (1923) 244, *in obs. pro R. leytense*.

var. leytense

LUZON: Sorsogon (Mt Bulusan); LEYTE: Mt Ibuni (back of Dagami), Mt Lobi, CAMIGUIN. Mossy forest, probably above 1000m.

var. loheri (HF Copel.) Sleum., *Reinwardtia* 5 (1960) 218; --*Rhododendron loheri* HF Copel., *PJS* 40 (1929) 166, t. 11, Fig. 10-12. --Type: Loher 14769 (PNH, holo, lost; E, fragm. ex PNH; UC). Luzon: Rizal prov., Guiniuisan.

LUZON: Rizal (Guiniuisan). Known only from the type collection.

Rhododendron loboense HF Copel., *PJS* 40 (1929) 137, 172, t. 15, Fig. 3, t. 16, Fig. 5-6; Sleum., *Reinwardtia* 5 (1960) 130. --Type: FB 28045 Mabesa (PNH, holo, lost; A, E, fragm.). Luzon: Batangas prov., Lobo Mtns.

LUZON: Batangas (Lobo Mtns), MINDORO: Mindoro Oriental (Mt Halcon), CAMIGUIN (Mt Hibok-hibok). *Fl. Apr.*

Rhododendron madulidii Argent, *New Plantsman* 5(4) (1998) 204. --Type: PALAWAN: Mt Mantalingahan, near Brookes Point.

Rhododendron mendumiae Argent, *Gard. Bull. Sing.* 56 (2004) 82, Fig. 2. --Type: PALAWAN: Cleopatra Needle.

Rhododendron mindanaense Merr., *Publ. Govt. Lab. Philipp. no.* 29 (1905) 41; *EPFP* 3 (1923) 244; --HF Copel., *PJS* 40 (1929) 164, t. 7, Fig. 10-11, t. 11, Fig. 3; Sleum., *Reinwardtia* 5 (1960) 219. --Type: EB Copeland 1042 (PNH, holo, lost), De Vore & Hoover 73 (PNH, paratype, lost; A; E, fragm. ex PNH).

MINDANAO: Mt Apo. Mossy dwarfed shrub vegetation near summit, 2700-2895m. *Fl. Jul, Aug.*

Rhododendron nortontiae Merr., *PJS* 1 (1906) Suppl. 220; *EPFP* 3 (1923) 244; --HF Copel., *PJS* 40 (1929) 149, t. 2, Fig. 2-4; --Sleum., *Reinwardtia* 5 (1960) 103. --Type: Clemens 500 (PNH, holo, lost; E, fragm., sterile). Mindanao: Lanao del Sur prov., Camp Keithley, altitude 800m.

Rhododendron catanduanense Merr., in HF Copel., *PJS* 40 (1929) 149, t.2, Fig. 5-6. --Type: BS 30346 Ramos (PNH, holo, lost; E, fragm., sterile; iso: US*). Catanduanes: Mt Mariguison, altitude 270m, Nov-Dec 1917.

CATANDUANES (Mt Mariguison, alt. 270m). NEGROS: Negros Oriental (Cuernos Mtns), MINDANAO: Lanao del Sur (Camp Keithley, alt. 800m).

Rhododendron quadrasianum Vidal, Rev. Pl. Vasc. Filip. (1886) 170; --HF Copel., PJS 40 (1929) 140, t. 1, Fig. 1, 2 (not typical); --Merr., EPFP 3 (1923) 244; --Sleum., Reinwardtia 5 (1960) 65.
--Type: Vidal (K, holo). Luzon: Albay prov., Mt Mayon.

var. quadrasianum

LUZON: Camarines Sur (Mt Isarog), Albay (Mt Mayon). Rocky open slopes, 1330-2100m, abundant. *Fl./fr.* May-Jun.

var. davaoense (HF Copel.) Sleum., Reinwardtia 5 (1960) 65; --Rhododendron quadrasianum holo, lost; iso: GH, K, L*, NY, US*). Mindanao: Davao, Mt Apo, 31 Mar 1905.

forma davaoense HF C

Rhododendron quadrasianum forma negrosense HF Copel., PJS 40 (1929) 142, t. 1, Fig. 6. --Type: Merrill Philip. Pl. 247 (PNH, holo, lost; iso: FI, L*, U, US*). Negros: Negros Occidental prov., Mt Kanlaon, Apr 1910.

LUZON: Laguna-Quezon (Mt Banahaw; Mt Mahayhay), Sorsogon (Mt Bagua), LEYTE, NEGROS: Negros Occidental (Mt Canlaon; Mt Mapara), Negros Oriental (Cuernos Mtns), MINDANAO: Davao (Mt Apo), South Cotabato (Mt Matutum). Dense mossy forest on summits, 1600-2440m. *Fl./fr.* Jan-Dec.

var. intermedium Merr., PJS 3 c (1908) Bot. 382; EPFP 3 (1923) 244; --HF Copel., PJS 40 (1929) 143, t. 1, Fig. 11, 12, 29; --Sleum., Reinwardtia 5 (1960) 66. --Type: FB 8063 Curran & Merritt (PNH, holo, lost; US*). Luzon: Zambales prov., Nov-Dec 1907.

LUZON: Abra (Mt Paraga), Mountain Province (Mt Sisipitan), Benguet, Zambales (Mt Tapulao; Mt Pinatubo). Open exposed ridges, 2000-2400m.

var. malindangense (Merr.) HF Copel., PJS 40 (1929) 142, t. 1, Fig. 7, 8; --Sleum., Reinwardtia 5 (1960) 66; --Rhododendron malindangense Merr., PJS 3 c (1908) Bot. 256; EPFP 3 (1923) 244.

--Type: FB 4705 Mearns & Hutchinson (PNH, holo, lost; iso: BO, K, NY, US*). Mindanao: Misamis Occidental prov., Mt Malindang, May 1906.

CAMIGUIN (Mt Hibok-hibok), MINDANAO: Misamis Occidental (Mt Malindang), Bukidnon (Mt Candoon; Mt Kitanglad), Agusan del Norte (Mt Hilong-hilong); Mossy forest, 1000-1600m. *Fl./fr.* Mar-Sept.

var. marivelesense (HF Copel) Sleum., Reinwardtia 5 (1960) 66; --Rhododendron quadrasianum forma marivelesense HF Copel., PJS 40 (1929) 141, t. 1, Fig. 3, 4, 25-27. --Type: Merrill 3215

(PNH, holo, lost; iso: BM, K, L*, 2 sheets, NY, P, US*). Luzon: Bataan prov., Mt Mariveles, Lamao River, Oct 1903.

LUZON: Bataan (Mt Mariveles), Laguna (Mt Makiling; Mt San Cristobal), Batangas (Mt Agas), MINDORO: Mindoro Oriental (Mt Halcon), LEYTE (*Wenzel 930*, cited by H Copeland but not by Sleumer). Mossy forest, 1200-2500m. *Fl./fr.* Mar-Nov.

var. rosmarinifolium (Vidal) HF Copel., PJS 40 (1929) 144, t. 1, Fig. 13-18; --Merr., EPFP 3 (1923) 245; --Sleum., Reinwardtia 5 (1960) 65; --Rhododendron rosmarinifolium Vidal, Rev. Pl. Vasc. Filip. (1886) 172; --Merr., EPFP 3 (1923) 245. --Type: Vidal 1530 (K, holo; A, fragm.; iso; FI, L*, 2 sheets). Luzon: Mountain Province, Bontoc.

Rhododendron quadrasianum var. intermedium Merr., PJS 3 c (1908) Bot. 382, *pro parte*; EPFP 3 (1923) 244, *pro parte*; --Sleum., Reinwardtia 5 (1960) 65.

Rhododendron quadrasianum forma halconense HF Copel., PJS 40 (1929) 141, t. 1, Fig. 5. --Type: Merrill 5736 (PNH, holo, lost; iso: K, L*, NY*, P, US*). Mindoro: Mindoro Oriental prov., Mt Halcon, Nov 1906.

Rhododendron quadrasianum forma banahaense HF Copel., PJS 40 (1929) 145, t. 1, Fig. 24. --Type: Cumming 804 (PNH, holo, lost; iso: BM, CGE, FI, K, L*, MEL). Luzon: Laguna prov., Mt Banahaw.

Rhododendron quadrasianum forma pulogense HF Copel., PJS 40 (1929) 144, t. 1, Fig. 19-23. --Type: BS 44944 Ramos & Edaño (PNH, holo, lost; iso: A, BRI, L*, NY*, UC). Luzon: Benguet prov., Mt Pulag, Feb-Mar 1925.

LUZON: Benguet (Mt Sto. Tomas; Baguio; La Trinidad; Pauai; Mt Pulag), Mountain Province (Bauko; Mt Data; Bontoc; Bontoc-Banaue Road; Mt Caua), Ifugao (Mt Polis); Zambales Range (Mt Pinatubo); Laguna-Quezon prov. (Mt Banahaw), MINDORO:

Mindoro Oriental (Mt Halcon; Mt Dulangan; Ilong Peak), BILIRAN (Mt Suiro), NEGROS. Mossy (oak) forest, also in secondary growth and open places, locally common, 1300-2400m. *Fl./fr.* Jan-Dec.

Rhododendron reynoso Argent, Gard. Bull. Sing. 56(1&2) 84, Fig.3. --Type: PALAWAN: Cleopatra Needle.

Rhododendron rousei Argent & Madulid, New Plantsman 5(1) (1998) 25. --Type: Argent 8984 & E Reynoso
SIBUYAN: Mt Giting-giting.

Rhododendron x sarcodes Argent & Madulid, New Plantsman 2(3) (1995) 156. --Type: MINDANAO: North Cotabato (Mt Apo), altitude 1800m.

Rhododendron subsessile Rendle, J. Bot. 34 (1896) 357; --Merr., EPFP 3 (1923) 245; --HF Copel., PJS 40 (1929) Reinwardtia 5 (1960) 228. --Type: Whitehead *sn* (BM, holo). Luzon: Mountain Province, Mt Data. LUZON: Abra (Mt Paraga), Mountain Province (Mt Data; Bauko; Mt Sisipitan), Ifugao (Mt Polis; Banaue), Benguet (Pauai; Halsema Road; Mt Malaya; Mt Pulag; Mt Baudan; Bucao; Baguio; Mt Sto Tomas). Rather common in the pine region and the pine-oak association below the mossy forest, rare in the mossy forest (Mt Pulag), again on exposed grass-covered slopes above the moss forest, often in clumps or masses, 1300-2400m. *Fl./fr.* Jan-Dec.

Rhododendron taxifolium Merr., PJS 30 (1926) 419; --HF Copel., PJS 40 (1929) 156, t. 6; -- Sleum., Reinwardtia 5 E, type fragm.; K, P). Luzon: Benguet prov., Mt Pulag. LUZON: Benguet (Mt Pulag), alt. 2700m. Epiphytic shrub on trees in the mossy forest. *Fl.* Feb-Mar.

Rhododendron vidalii Rolfe, J. Bot. 24 (1886) 348; --Merr., EPFP 3 (1923) 245; --HF Copel., PJS 40 (1929) 152, t. 4, Fig. 3-4, t. 5; --Sleum., Reinwardtia 5 (1960) 151. --Type: Vidal 1529 (K, holo; FI, L). Luzon: Mountain Province, Bontoc. Rhododendron curranii Merr., PJS 3 c (1908) Bot. 255, 381., EPFP 3 (1923) 243. --Type: FB 8061 Curran & Merritt (PNH, lecto, lost; US).

ssp. vidalii

LUZON: Mountain Province (Bontoc; Bontoc-Banaue Road; Mt Caua; Mt Data; Bauko, Sabangan); Benguet (Loo; Bandschan; Tabbak), Abra, Cagayan (Mt Cagua), Isabela (Bayabat), Zambales (Mt Tapulao), Bataan (Mt Mariveles), Laguna (Mt Makiling); Quezon (Mt Banahaw de Lucban); Batangas. (Mt Malarayat). Mostly in mossy forest, but also terrestrial on banks in rather barren places or grassland, epiphytic on large, moss covered trees or terrestrial on shrubby mountain side or exposed ridges, locally not rare, 1000-2100m. *Fl.* Jan-Dec.

ssp. brachystemon Argent, Folia Malesiana 4(2) (2003) 101-128. --Type: MINDORO: Mindoro Oriental (Mt Halcon).

Rhododendron whiteheadii Rendle, J. Bot. 34 (1896) 356; --Merr., EPFP 3 (1923) 245; --HF Copel., PJS 40 (1929) 154, t. 4, Fig. 5-11. --Type: Whitehead, s.n. (BM, holo). Luzon: Ifugao prov., Mt Polis. (see Sleumer 1973, Blumea 21: (2), 357). LUZON: Ifugao (Mt Polis), Benguet (Mt Tabayoc; Mt Pulag), Zambales (Mt Tapulao),

Rhododendron wilkei Argent, Gard. Bull. Sing. 56(1&2) (2004) 88, Fig. 4. --Type: PALAWAN: Thumb Peak.

Rhododendron williamsii Merr. ex HF Copel., PJS 40 (1929) 137, 163, t. 9, t. 5. 11, Fig. 2; --Sleum., Reinwardtia 5 (1960) 190. --Type: Elmer 6519 (US, holo; K, NY, P). Luzon: Benguet prov., Baguio.

Rhododendron schadenbergii (*non* Warb.) Merr., EPFP 3 (1923) 245, *pro parte*.

LUZON: Mountain Province (Mt Data; Mt Pukis), Benguet (Baguio; Mt Sto Tomas; Tabio), Zambales (Mt Pinatubo). Along streams and ravines, 1500-2200m.

Rhododendron xanthopetalum Merr., Publ. Govt. Lab. Philipp. no. 29 (1905) 41; --Merr., EPFP 3 (1923) 246; --HF Copel., PJS 40 (1929) 169, t. 16, Fig. 1-2. --Type: Whitford 322 (PNH, holo, lost).

LUZON: Nueva Vizcaya (Caraballo Sur Mtns, *Loher sn*, UC), Bataan (Mt Mariveles), Rizal (Montalban, *Loher sn*, UC), MINDORO: (Ibolo, *FB 11429 Merritt*). In Bataan, an epiphyte in mossy forest, 1200m. An imperfectly known species. Apparently rare.

Rhododendron zollingeri JJ Sm, Icon. Bog. 4 (1910) 73, t. 322, --Sleum., Reinwardtia 5 (1960) 109. --Type from Java.

Java, Bali, Lombok, Sulawesi and N Philippines.

LUZON: Benguet (Loo, Mt Bandschan, not recollected there). Habitat in the Philippines not noted. Reported elsewhere in Malesia on bare open slopes or ridges, exposed summits, volcanic rocks or crater walls, in fern-, grass-, and scrub vegetation or open forest, in *Casuarina* forest, on dry places, on sandy, stony, or ashy soil, also near solfataras, common locally, (1200-)1800-3090m. *Fl./fr.* predominantly in the dry season Apr-Oct.

?Ined. name:

Rhododendron brookeanum Low ex Lindl., J. Hort. Soc. 3 (1848) 82.

ssp. palawanense

Palawan: Mt Mantalingahan. Argent M27

Very close to var. *kinabaluense* but differs in the longer flower-tubes, the almost glabrous ovary (lacking silvery scales as well as only having a few scattered simple hairs) and a longer style with a smaller stigma. Flowers orange with yellow star, highlighted with dark pink at the edge. Anthers purple.

6. Vaccinium Linnaeus

Revision:

H Sleumer. 1961. **xxxxx** Blumea 11: 10-112; *ibid.* 12 (1963) 123; *ibid.* 12 (1964) 343.

HF Copeland. 1930. *Philippine Ericaceae, II. The species of Vaccinium*. Philippine Journal of Science 42: 537-607, +7 pl.

Vaccinium agusanense Elmer, LPB 7 (1915) 2630; --Merr., EPFP 3 (1923) 247; --HF Copel., PJS 42 (1930) 551, t. 1, Fig. 3-5; --Sleum., Blumea 11 (1961) 49. --Type: Elmer 13765 (PNH, holo, lost; iso: BISH*, BM, BO, FI, GH, K, L*, NY*, US*). Mindanao: Agusan del Norte prov., Mt Urdaneta [=Mt Hilong-hilong], "epiphytic shrub upon a mossy wind-swept peak of the Maaay group at 5750ft [=1752m]", Sept 1912.

MINDANAO: Agusan del Norte (Mt Hilong-hilong); Lanao del Sur, Bukidnon (Kabaritan; Mt Kitanglad). In semi-open mountain forest, or in mossy forest, 1100-1800m. *Fr.* Feb., Sept.

Vaccinium alvarezii Merr., PJS 4 c (1909) Bot. 304; EPFP 3 (1923) 247; --HF Copel., PJS 42 (1930) 562, t. 3, Fig. 5-6; --Sleum., Blumea 11 (1961) 87. --Type: FB 18466 (PNH, holo, lost). Luzon: Cagayan prov., Dalisay River.

Vaccinium turbinatum Merr., PJS 10 c (1915) Bot. 54; EPFP 3 (1923) 252. --Type: BS 15068 Ramos (US*,

holo; iso K). Luzon: Laguna prov., San Antonio near Paete.

var. alvarezii

LUZON: Sierra Madre Range in Cagayan (Mt Cagua; Dalisay River), Rizal (Mt Irid, =Irid; Angilog =?Angilo or Angelo Mtns; Montalban), Laguna (Siniloan; San Antonio). Primary forest, (100-) 300 to at most 1470m (Sleumer's maximum citation of '2000m' is improbable as the highest point among aforementioned localities is 1470m on Mt Irid summit).

var. moisense HF Copel., PJS 42 (1930) 564; --Sleum., Blumea 11 (1961) 88. --Type: BS 47303 Ramos & Edaño (UC*, holo; BM, L*, NY*, P, SING*). Luzon: Isabela prov., Mt Moises, epiphytic, altitude 900m, Mar 1926.

LUZON: Isabela (Mt Moises), epiphytic at 900m. Known only from the type collection.

Vaccinium bancanum Miq., Fl. Ind. Bat. Suppl. 1 (1860) 587. --Type from Banka.

Vaccinium suluense HF Copel., PJS 42 (1930) 568. --Type: Clemens 9337 (PNH, sterile, possibly lost). Sulu.

var. bancanum

Sumatra (W coast), Lingga, Banka, Billiton, Anambas Is., Borneo.

MINDANAO: Bukidnon (Mt Maraniag, *FB 30277 Rojas*, only collected in fruit and cited by H Copeland as *V. suluense*, possibly lost); SULU. On a hill (possibly with secondary forest, 10m alt.) in SULU, c. 730m in Bukidnon. Sleumer (Blumea 11 (1961) 74; Fl. Males. ser.1, 6 (1967) 840) did not accredit this species to the Philippines, though *V. suluense* is included in the synonymy of *V. bancanum*.

Vaccinium banksii Merr., Publ. Govt. Lab. Philipp. no. 35 (1906) 54; EPFP 3 (1923) 248; --HF Copel., PJS 42 (1930) 590. --Sleum., Blumea 11 (1961) 81. --Type: Banks, *s.n.* (PNH, holo, lost). Neotype: Merrill 223 (US, cit. HF Copel.; Fl, G, PNH (lost)).

NEGROS: Negros Occidental (Mt Kanlaon). On ridges in the mossy forest, 1300-2000m.

Vaccinium barandanum Vidal, Rev. Pl. Vasc. Filip. (1886) 169; --Merr., EPFP 3 (1923) 248; --HF Copel., PJS 42 (1930) holo; iso: Fl, L*). Luzon: Lepanto [=most likely in present-day W Mountain Province).

var. barandanum

LUZON: Abra (Tue, near Sallapadan), Ilocos Sur (Cervantes), Mountain Province (W part, portion of the former Lepanto subprov. where the type originated; Mt Sisipitan; Mt Data; ?Tadian; Bucao; Mt Malaya), Benguet (Pauai and vicinity; Mt Pulag; La Trinidad to Tabio; Baguio; Mt Sto Tomas), Nueva Vizcaya (Caraballo Mtns); Zambales (Mt Pinatubo), Rizal (Sierra Madre Range towards Quezon and Bulacan borders; Montalban-Paningtingan area; Balacbac). In damp shaded ravines and in mossy forest, also in pine-oak association, reported to be tree-like on cliffs, 1300-2600m, locally not rare. *Fl./fr.* Jan.-Dec.

var. cagayanense HF Copel., PJS 42 (1930) 557; --Sleum., Blumea 11 (1961) 49. --Type: BS 47300 Ramos & Edaño (UC*, holo; iso: A, BM, BO, L*, NY*, P, SING 2 sheets*). Luzon: Isabela prov., Mt Moises, Mar 1926.

LUZON: Ifugao (Monhoyohoy), Benguet (Mt Pulogloco), Cagayan (Mt Cagua; Mt Dos Cuernos), Isabela (Mt Moises), Quirino-Aurora border (Mt Alzapan), Laguna (Luisiana).

var. hutchinsonii (Merr.) HF Copel., PJS 42 (1930) 558; --Sleum., Blumea 11 (1961) 49; --*Vaccinium hutchinsonii* Merr., PJS 2 c (1907) Bot. 294; EPFP 3 (1923) 249. --Type: Merrill 5524 (PNH, holo, lost; iso: NY*, US*). Mindoro: Mindoro Oriental prov., Mt Halcon, Nov 1906.

MINDORO: Mindoro Oriental (Mt Halcon). Epiphytic in mossy ridge forest, 1600-2000m. *Fl.* Nov.

Possible undescribed variety: *fide* Sleum., Blumea 11 (1961) 49. --Voucher: BS 75850 Edaño (BO, NY, PUH*).

LUZON: Camarines Sur (Kamugong River, 485 m). A plant corresponding to var. *hutchinsonii* in leaf characters, but with densely shortly grey-pubescent rhachis, pedicel, calyx and disk, appears to be an undescribed variety. However, can not yet be named as no flowers are present.

Vaccinium benguetense Vidal, Rev. Pl. Vasc. Filip. (1886) 168; --Merr., EPFP 3 (1923) 248; --HF Copel., PJS 42 (1930) 566, t. 3, Fig. 9-11; --Sleum., Blumea 11 (1961) 104. --Type: Vidal 1534 (K, lecto; isolecto: FI, L*, MA); 1515 (*fr.*, syntype). Luzon: Benguet prov., no precise locality cited.

LUZON: Ilocos Norte (Mt Piao), Ilocos Sur (no precise locality, most probably E part), Abra (no precise locality, most probably E part), Mountain Province (Mt Data; Bauko; Mankayan; Mt Masapilid), Benguet (no precise locality, type locality; Buguias; Mt Pulag; Baguio), Zambales (Mt Pinatubo; Mt Tapulao); 'LUZON Central'; PANAY: Iloilo (Miag-ao, Mt Pulacan). Forested slopes and in ravines, 500-1600m. *Fl.* Jan-Dec.

Vaccinium brachytrichum Sleum., Blumea 11 (1961) 78. --Type: Merrill 9526 (not 'BS 9526 Merrill' cit. Sleumer) (L*, holo; iso in BM, BO, GH, K, NY*, P, SING*, US). Palawan: Palawan prov., Mt Capoas, Apr 1913.

Vaccinium foxworthyi HF Copel., PJS 42 (1930) 580, *pro parte*.

PALAWAN: Mt Capoas, alt. 1000m. *Fl./fr.* April. Only known from the type collection, unless conspecific with *Elmer 13202*, in fruit, from nearby Mt Pulgar. The latter is similar to the type but with narrower leaves.

Vaccinium camiguinense Merr., PJS 7 c (1912) Bot. 321; EPFP 3 (1923) 248; --HF Copel., PJS 42 (1930) 578; --Sleum., Blumea 11 (1961) 72. --Type: BS 14622 Ramos (PNH, holo, lost). Paratypes: BS 14680 Ramos (BM, BO, K, L, P).

CAMIGUIN (Mt Mahinog). Mossy forest near summit, c. 1000m. *Fl./fr.* Mar-Apr.

Vaccinium caudatum Warb., in Perkins Fragm. Fl. Philipp. (1905) 173; --Merr., EPFP 3 (1923) 248; --HF Copel., PJS 42 (1930) 565, t. 3, Fig. 7-8; --Sleum., Blumea 11 (1961) 104; *ibid.* 12 (1963) 137. --Type: Cuming 905 (B, lecto, lost; BM, FI, G, K, L*). Luzon: Albay prov.; syntype: Warburg 13753, from Laguna prov., Siniloan (B, lost; E, cited by Sleumer, 1961).

LUZON: Cagayan (Pinagtipunan River), Rizal (Montalban; Balacbac), Laguna (Siniloan; S. Bakong, Famy; Paete, San Antonio), Albay (unlocalized for the type collection); MINDORO (Mag-asawang Tubig), LEYTE (Jaro); PANAY: Aklan (Libacao; Mt Salibongbong), Iloilo (Ulian River), MINDANAO: Surigao del Norte (Placer). Damp primary forests at low altitudes, mostly below 500m. *Fl.* Jan-Dec

Vaccinium cumingianum Vidal, Rev. Pl. Vasc. Filip. (1886) 167; --Merr., EPFP 3 (1923) 248; --HF Copel., PJS 42 (1930) 584, t. 6, Fig. 1-3; --Sleum., Blumea 11 (1961) 82. --Type: Cuming 805 (PNH, lecto, lost; iso B

var. cumingianum

LUZON: Rizal (Sierra Madre Range towards Quezon border; Montalban), Laguna-Quezon (Mt Banahaw; Mt San Cristobal), Quezon (Mt Banahaw de Lucban; Mt Calvario), Batangas (Lobo Mtns). A form with smaller leaves: Quezon-Aurora border (Umiray); Nueva Ecija (Mt Umingan, =Mt Mingan), Rizal (Sierra Madre Range at Mabiluang). Montane forest, especially mossy forest, locally common on exposed ridges, (600-) 1100-2000m. *Fl.* Jan-Dec

var. igorotorum HF Copel., PJS 42 (1930) 586; --Sleum., Blumea 11 (1961) 83. --Type: Elmer 5804 (US*, holo; iso K, NY*, P). Luzon: Benguet prov., Mt Sto Tomas, Mar 1904.

LUZON: Mountain Province (Bauko; Mt Sinapsapan; Mt Pukis), Benguet (Mt Nangaoto; Mt Singakalsa; Lusud-Bayabas trail, Mt Pulag; Mt Baudan; Pauai; Mt Sto Tomas; Baguio), La Union (Naguilian), Benguet-Nueva Vizcaya prov. border. Altitude 1500 to more than 2000m in the Cordillera Highlands of N LUZON.

var. marivelesense HF Copel., PJS 42 (1930) 586; --Sleum., Blumea 11 (1961) 83. --Type: Whitford 459 (US, holo; iso in K, NY).

LUZON: Zambales Range (general vicinity of Mt Pinatubo including Mt Abu); Bataan (Mt Mariveles).

var. pyriforme (Merr.) HF Copel., PJS 42 (1930) 586; --Sleum., Blumea 11 (1961) 83; --Vaccinium pyriforme Merr., PJS 2 c (1907) Bot. 295; EPFP 3 (1923) 251. --Type: FB 4424 Merritt (PNH, holo, lost; K). Mindoro: Mindoro Oriental prov., Mt Halcon.

LUZON: Camarines Norte or Camarines Sur (exact locality illegible), Albay (Mt Mayon), MINDORO: Mindoro Oriental (Mt Halcon), PANAY: Capiz (Mt Bulilao). Epiphytic in forest on Mt Halcon, at least 1260-2700m on Mt Mayon.

Possible new variety:

Voucher: L. Co 3800 (PUH, replicates to be distributed to A, L, US, K)

LUZON: Ifugao (Mt Polis), high-montane forest, 1845 m. Closest to var. *marivelesensis* & var. *pyriforme* in having well-developed calyx lobes. Differing from the above in having a glabrous (non-ciliated calyx) and bigger leaves. Could be identical with BS 45660 Ramos & Edaño (cit. HF Copel., PJS 42 (1930) 587), probably an undescribed variety from north-central LUZON. Possibly lost at PNH in 1945 and hence not cited by Sleumer in his 1961 and 1966 revisions.

Vaccinium elegans Elmer, LPB 3 (1911) 1903; --Merr., EPFP 3 (1923) 249; --HF Copel., PJS 42 (1930) 569, t. 4, Fig. 1. A, BM, FI, G, GH, K, L, NY, P).

MINDANAO: Davao (Mt Apo), Bukidnon (Mt Kitanglad), twice found. Mossy forest over ridges, 1980-2370m. *Fl.* Apr, Sept.

Vaccinium epiphyticum Merr., PJS 7 c (1912) Bot. 322; EPFP 3 (1923) 249; --HF Copel., PJS 42 (1930) 555. --Sleum., Blumea 11 (1961) 48. --Type: Merrill 8087 (PNH, holo, lost; BM, K, L). Mindanao: Zamboanga (Sax River, Mtns above San Ramon), c. 900m.

MINDANAO: Zamboanga. Known only from the type collection. *Fl.* Nov.

Vaccinium gitingense Elmer, LPB 4 (1912) 1490; --Merr., EPFP 3 (1923) 249; --HF Copel., PJS 42 (1930) 553, t. 2, Fig. 1-3; --Sleum., Blumea 11 (1961) 46. --Type: Elmer 12555 (PNH, holo, lost; A, BM, BO, DS, FI, G, GH, K, L, P, US). Sibuyan: Mt Giting-giting.

SIBUYAN; MINDANAO: Surigao del Norte (Tubungan-Dayana; Iron Deposit), DINAGAT. On hot, dry, gravelly river bottom (probably washed down from mountain forest, showing minor leaves) or along streams and on ridges at low altitude, ascending to 450m. Aforecited localities (especially Surigao and Dinagat) are predominantly ultramafic sites.

Vaccinium halconense Merr., PJS 2 c (1907) Bot. 294; EPFP 3 (1923) 249; --HF Copel., PJS 42 (1930) 578, t. 5, Fig. 6-7; --Sleum., Blumea 11 (1961) 89. --Type: Merrill 5665 (PNH, holo, lost; iso: K, NY, US). Mindoro: Mindoro Oriental prov., Mt Halcon.

LUZON: Zambales (Mt Tapulao; Mt Pinatubo), Bataan (Mt Mariveles), MINDORO: Mindoro Oriental (Mt Halcon; Ilong Peak), NEGROS: Negros Occidental (Mt Mapara), Negros Oriental (Cuernos Mtns); MINDANAO: Bukidnon (Tangkulan and vicinity), Davao (Mt McKinley), South Cotabato (Mt Matutum). In mossy forest, on exposed ridges, 1200-2135m. *Fl./fr.* Jan.-Dec.

Vaccinium indutum Vidal, Rev. Pl. Vasc. Filip. (1886) 169; --Merr., EPFP 3 (1923) 249; --HF Copel., PJS 42 (1930) 594, t. 6, Fig. 6-8; --Sleum., Blumea 11 (1961) 35. --Type: Vidal 1831 (K, holo; L, MA).

Vaccinium macgregorii Merr., PJS 10 c (1915) Bot. 53; EPFP 3 (1923) 250. --Type: BS 19846 McGregor

(PNH, holo, lost; iso in BM, K, P, US). Luzon: Ifugao prov., Mt Polis
Vaccinium sorsogonense Elmer, LPB 10 (1939) 3730. --Type: Elmer 17026 (PNH, holo, lost; iso in BM, BO, FI, K, L, NY, UC, US). Luzon: Sorsogon prov., Mt Bulusan.

LUZON: Mountain Province (source of type, precise locality not known but probably along W half; Malamey; Mt Caua), Ifugao (Mt Polis), Benguet (Mt Pulag), Sorsogon (Mt Bulusan). Rocky ground of densely wooded steep slopes, also in mossy forest, apparently generally above 1000m, rarely down to 600m. *Fl.* Feb.-Aug.

Vaccinium irigaense Merr., PJS 10 c (1915) Bot. 52; EPFP 3 (1923) 249; --HF Copel., PJS 42 (1930) 576, t. 5, Fig. 3-5; --Sleum., Blumea 11 (1961) 88. --Type: Philip. Pl. 1549 Ramos (PNH, holo, lost; iso in BM, BO, BRI, G, GH, L*, K, NY*, P, SING*). Luzon: Camarines Sur prov., Mt Iriga.
LUZON: Camarines Sur (Mt Iriga), Sorsogon (Mt Bulusan; Mt Poidol); CATANDUANES (Mt Mariguidon); BILIRAN (Mt Suiro). On ridges in mossy forest, 530-1000m.

Vaccinium jagori Warb., in Perkins Fragm. Fl. Philipp. (1905) 174; --Merr., EPFP 3 (1923) 250; --HF Copel., PJS 42 (1930) 592, t. 6, Fig. 4-5; --Sleum., Blumea 11 (1961) 98. --Type: Jagor *s.n.* (B, holo, lost).

Vaccinium angustilimum Merr., PJS 12 c (1917) 294; EPFP 3 (1923) 248. --Type: BS 26603 Ramos & Edaño (PNH, holo, lost)
LUZON: Abra (no precise locality given), Mountain Province (Mt Malaya; Bauko), Benguet (Mt Nangaoto; Mt Natoo), Isabela (no precise locality data), Aurora (Mt Dingalan), Zambales (Mt Tapulao =High Peak), Bataan (Mt Mariveles), Rizal (Sierra Madre Range at Montalban; Angilog =probably Angelo Mtns or Angilo; Mt Irid), Quezon (Mt Binuang), Camarines Sur (Mt Isarog). Exposed ridges in primary forest or in the mossy forest, (300-) 1000-2000m.

Vaccinium luzoniense Vidal, Rev. Pl. Vasc. Filip. (1886) 168; --Merr., EPFP 3 (1923) 250; --HF Copel., PJS 42 (1930) 570, t. 4, Fig. 3-6; --Sleum., Blumea 11 (1961) 77. --Type: Vidal 1535 (K, holo).

LUZON: Mountain Province (W part, type locality not specified; Mankayan), Ifugao-Mountain Province (South Inomin), Benguet (Loo; Pauai; Baguio; Mt Sto Tomas). Forested stream depressions and on ridges in the mossy forest, also on rocky banks by roadsides, 1500-2100m. *Fl./fr.* April-July.

Vaccinium microphyllum Reinw. ex Blume, Bijdr. (1826) 851; --Merr., EPFP 3 (1923) 250; --HF Copel., PJS 42 (1930) 600, t. 7, Fig. 3-7; --Sleum., Blumea 11 (1961) 33, *non* King & Gamble (1905). --Type from the Philippines, Moluccas (Ternate; Tidore; Halmahera); Vanuatu (Espiritu Santo).

Vaccinium mindorense Rendle, J. Bot. 34 (1896) 355.
LUZON: Laguna (Mt Banahaw); MINDORO: Mindoro Oriental (Mt Dulangan; Mt Halcon), NEGROS: Negros Occidental (Mt Kanlaon), PANAY: Antique (Mt Madias), MINDANAO: Davao (Mt Apo). Mossy exposed ridges and also epiphytic in mossy forest, locally common, 1220-2954m.

Vaccinium myrtoides (Blume) Miq., Fl. Ind. Bat. 2 (1859) 1062; --Merr., EPFP 3 (1923) 250; --HF Copel., PJS 42 (1930) 596, t. 7, Fig. 1-2; --Sleum., Blumea 11 (1961) 51; *ibid.* 12 (1963) 127; --*Thibaudia myrtoides* Blume Bijdr. (1826) 861. --Type from the Moluccas.

Vaccinium microphyllum Fern.-Villar, Novis. App. (1880) 121 *pro parte, non* Reinw. ex Blume.

Vaccinium varingiaefolium Vidal, Sinopsis Atlas (1883) 30, t. 60, Fig. D, *non* (Blume) Miq.

Vaccinium villarii Vidal, Rev. Pl. Vasc. Filip. (1886) 166.

Philippines, N Sulawesi (Minahassa), Moluccas (Peak of Tidore).

LUZON: Ilocos Sur (Cervantes trail), Mountain Province (Sagada; Mt Data; Bauko), Ifugao (Mt Polis), Benguet (Loo; Mt Pulag; Halsema Road; Pauai; Baguio); Laguna-Quezon (Mt San Cristobal; Mt Banahaw), Quezon, Albay (Mayon Volcano), MINDORO: Mindoro Oriental (Mt Halcon), MINDANAO: Davao (Mt Apo). On steep rocky, open and

bare slopes, pine-mossy forest borders, mossy forest undergrowth, summit vegetation, open montane grassland, 1000– c.3000m. Locally abundant in Benguet and summit area of Mt Apo.

Vaccinium nitens Sleum., *Blumea* 11 (1961) 97. --Type: PNH 17677 Sulit & Conklin (L*, holo; iso in BM, K, L). Mindoro: Mindoro Oriental prov., Mt Yagaw, E slopes, steep rocky slope in virgin forest, altitude 2500ft, 7 Jun 1953.

MINDORO: Mindoro Oriental (Mt Yagaw). Steep rocky slope in virgin forest, alt. 760m. *Fl.* July.

Vaccinium oscarlopezianum Co, *Edinburgh J. Bot.* 59(3) (2002) 373-376. --Type: Co 3326 (PNH, holo; iso in A*, PUH*, CAHUP, L, US, K). Luzon: Isabela prov., San Mariano Municip., *Barangay* Disulap, Dappig Creek, 16°56.5'N, 122°13'E

LUZON: Isabela (San Mariano, 3 collections), Aurora (Mtns NNW of Dingalan =Mingan Mtns, *Jacobs 7691*; *Diteki*, *PPI collection*). High-canopy epiphyte in fairly open sites like creeks and logging trails, altitude 490-740m. Collected in flower in February and fruiting in March. Fairly common in the vicinity of the type locality. Thus far known from two sites that are c.175(?) km apart.

Vaccinium palawanense Merr., *PJS* 3 c (1908) *Bot.* 373; *EPFP* 3 (1923) 251, *pro parte*; --HF Copel., *PJS* 42 (1930) Foxworthy (PNH, holo, lost; iso in BM, BO, K, L*, NY, 2 sheets*, SING*, US*). Palawan: Mt Victoria. Mar-Apr 1906.

var. palawanense

PALAWAN (Mt Victoria); MINDANAO: Davao (Mt Apo). On exposed ridges and steep cliffs in mossy forest, 1000-1820m.

var. foxworthii (HF Copel.) Sleum., *Blumea* 11 (1961) 73; --*Vaccinium foxworthii* HF Copel., 'foxworthyi' *PJS* 42 (1930) 580, *pro parte*. --Type: BS 649 Foxworthy (PNH, holo, lost; iso in BM, BO, GH, L*, NY*, US). Palawan: Mt Victoria, Mar-Apr 1906

PALAWAN (Mt Victoria). Once found together with var. *palawanense* at 1750m.

Vaccinium perrigidum Elmer, *LPB* 3 (1911) 1094; --Merr., *EPFP* 3 (1923) 251; --HF Copel., *PJS* 42 (1930) 561, t. 3, Fig. 1-4; --Sleum., *Blumea* 11 (1961) 86. --Type: Elmer 11686 (PNH, holo, lost; iso in A, BM, BO, FI, GH, L, NY, US). Mindanao: Davao, Mt Apo.

MINDANAO: Agusan del Norte (Mt Urdaneta), Davao (Mt Apo; Mt McKinley). On rocky bluffs or ridges in the mossy forest, 1525-1675m.

Vaccinium philippinense Warb., in Perkins *Fragm. Fl. Philipp.* (1905) 174; --Merr., *EPFP* 3 (1923) 251; --HF Copel., *PJS* 42 (1930) 550, t. 1, Fig. 1-2; --Sleum., *Blumea* 11 (1961) 49. --Type: Cuming 832 (cited by Sleumer as '822') (B, holo, lost; iso in A, BM, K, L*, NY*). Luzon: Laguna prov., Mayayay (possibly Majayjay, a classical Cuming locality). Locality according to Sleumer.

LUZON: Mountain Province (W part formerly under the old Lepanto subprov.), Nueva Ecija (Mt Umingan, =Mingan), Rizal (Mt Batay; Mt Susong Dalaga; Mt Irid; Angilog (=possibly Angelo Mtns or Angilo towards Quezon prov.); Mt Lumutan; Montalban; San Isidro, Tanay), Laguna (San Antonio, Paete; Mt Makiling), Quezon-Laguna prov. (Mt San Cristobal and Mahayhay 'Mayayay', type locality, *fide* Sleumer). On forested slopes and ridges, 800-1200m. *Fl./fr.* Apr-Dec.

Vaccinium platyphyllum Merr., *PJS* 12 c (1917) *Bot.* 294; *EPFP* 3 (1923) 251; --HF Copel., *PJS* 42 (1930) 573, t. 5, Fig. 1-2; --Sleum., *Blumea* 11 (1961) 50. --Type: BS 26583 Ramos & Edaña (PNH, holo, lost; iso in *Vaccinium ilocanum* Merr., *PJS* 14 (1919) 441; *EPFP* 3 (1923) 249. --Type: BS 33372 Ramos (PNH, holo, lost; iso in A, BO, K, L*, P, US*). Luzon: Ilocos Norte prov., Mt Palimlim, Aug 1918.

Vaccinium rizalense Merr., *PJS* 27 (1925) 43; *EPFP* 4 (1925) 253. --Type: Loher 14979 (PNH, holo, lost; iso in UC). Luzon: Rizal prov., Balacbac.

LUZON: Ilocos Norte (Mt Palimlim), Aurora (Mt Dingalan), Rizal (Guiniuisan; Balacbac). Shrub, small tree or epiphytic in primary lowland to mossy forest, 200-1100m. Fl. Jun-Aug.

Vaccinium pseudocaudatum Sleum., Blumea 11 (1961) 103. --Type: FB 31527 Franco (NY*, holo). Mindanao: Bukidnon. MINDANAO: Bukidnon. Near creek along edge of grassland, altitude 670m. Perhaps also growing at higher altitude. Fl. Feb, Dec.

Vaccinium sylvaticum Elmer, LPB 3 (1911) 1095; --Merr., EPFP 3 (1923) 251; --HF Copel., PJS 42 (1930) 588; --Sleum., Blumea 11 (1961) 98. --Type: Elmer 11819 (PNH, holo, lost; iso: A, BM, BO, FI, G, GH, K, L, NY, US). Mindanao: Davao, Mt Apo, Todaya, altitude 1250m.

Vaccinium mearnsii Elmer, LPB 3 (1911) 1098; --Merr., EPFP 3 (1923) 250. --Type: Elmer 11251 (PNH, holo, lost; iso in A, BM, BO, FI, G, GH, K, L, NY, US). Mindanao: Davao, Mt Apo, Todaya, altitude 1000m.

MINDANAO: Davao (Mt Apo, Todaya). Forested ridges, 1000-1250m. Fl./fr. Aug-Sept.

Vaccinium tenuipes Merr., PJS 3 c (1908) Bot. 375; EPFP 3 (1923) 251; --HF Copel., PJS 42 (1930) 571, t. 4, Fig. 7-8; --Sleum., Blumea 11 (1961) 77; *ibid.* 12 (1963) 130. --Type: Clark, s.n. (PNH, lecto, chosen by HF Copel., FI, K, L*). Syntypes: Merrill 6133 (PNH, lost); FB 11485 Merritt, PNH, lost; Elmer 9819 (PNH, lost).

LUZON: Cagayan (Cagua Volcano; Bauan-Mt Tabuan), Ifugao-Mountain Province (South Inomin), Benguet (Mt Pulag; Mt Pulogloco), Rizal (Sierra Madre Range at Angilog, =possibly Angelo Mtns or Angilo; Montalban); MINDORO: Mindoro Oriental (Mt Halcon; Ibolo River); NEGROS: Negros Oriental (Cuernos Mtns); PANAY: Capiz (Jamindan). In primary forest, 600-1500m; on Mt Pulag in mossy forest at 2600m. Fl. Feb-Sept.

Vaccinium trichocarpum Sleum., Blumea 11 (1961) 47. --Type: PNH 10778 Mendoza & Convozar (L*, holo).

MINDANAO: Agusan del Norte (Mt Hilong-hilong, peak of Mt Malampayan); Davao Oriental (Mt Mayo). In summit vegetation, 1300-1750m. Fl./fr. Apr.

Vaccinium vidalii Merr. & Rolfe, PJS 3 c (1908) Bot. 374; --Merr., EPFP 3 (1923) 252; --HF Copel., PJS 42 (1930) 582, t. 5, Fig. 10-11; --Sleum., Blumea 11 (1961) 80. --Type:

LUZON. On exposed ridges in the mossy forest, (300-) 850-2000m.

Vaccinium whitfordii Merr., PJS 2 c (1907) Bot. 295; EPFP 3 (1923) 252; --HF Copel., PJS 42 (1930) 594, t. 6, Fig. 6 (K, US). Negros: Negros Occidental prov., Mt Silay.

LUZON: Ilocos Norte (Mt Nagapatan), Abra (Mt Paraga), Kalinga (trail to Balbalasang), Mountain Province (W part, formerly part of Lepanto subprov.; Mt Data; Mt Malaya), Benguet (Bucayo; Pauai; Baguio), Ifugao (Mt Polis), Nueva Ecija (Mt Umingan =Mt Mingan); Aurora (Mt Alzapan, along Sierra Madre Mtn Range near Quirino prov. border), Rizal (Sierra Madre Mtns near Quezon border), Camarines Sur (Mt Isarog), MINDORO: Mindoro Oriental (Mt Halcon-Ilong Peak), NEGROS: Negros Occidental (Mt Silay; Mt Kanlaon), LEYTE. In forests, open heaths and thickets, 1000-2500m. Fl./fr. Jan-Dec.

Vaccinium woodianum HF Copel., PJS 42 (1930) 591; --Sleum., Blumea 11 (1961) 82. --Type: Merrill 5506 (PNH, holo, lost; iso in NY, flowers partly galled, US). Mindoro: Mindoro Oriental prov., Mt Halcon, alt. 2700m.

MINDORO: Mindoro Oriental (Mt Halcon), altitude 2700m. Known only from the type collection.